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REVIEWS AND SURVEYS.

IRVING FISHER ON CAPITAL AND INTEREST.

IN his two volumes on *The Nature of Capital and Income* and *The Rate of Interest*, Professor Irving Fisher has presented systematically his conceptions as to the relations between capital and interest and the nature of these two concepts themselves. They are the outcome of the critical inquiries portions of which have been presented to readers of economic periodical literature from time to time. We have now the opportunity of surveying the entire field, and of judging, not merely of the validity of particular criticisms of the form, or of the essence, of the views of others, but of the entire body of doctrine on behalf of which such criticisms have been put forward, to clear the way for truer conceptions and sounder views.

It may be stated, without much fear of contradiction, that the critical examination of current doctrines, to which many of us have been compelled by the forcible way in which Professor Fisher has assailed some of their apparently fundamental elements, has been of the greatest service in affording a clearer insight into the real nature of the concepts with which those doctrines were concerned. The writer is conscious that he owes a great deal to the suggestive discussions in which Professor Fisher has taken a leading part, and that his own views have been not a little modified and clarified through the unsparing criticism launched against loose modes of thinking by Professor Fisher.

But, when the constructive work presented in the two volumes before us comes to be examined, a sense of famili-

arity creeps over the studious reader. The language is specialized, and to some extent new, but the ideas covered, when submitted to careful examination, are very much like those which formed the basis of the first teachings on the subject which the present writer can recall, except in regard to points at which, in spite of general sympathy with the attitude of the New Haven professor, a consciousness of essential failure to assent to the views presented obtrudes itself.

The difficulty of adequately presenting in a half-score of pages an intelligent criticism of two substantial volumes will be manifest. Attention must necessarily be limited to a few points, and it may well be that the writer's disagreement with Professor Fisher will appear to touch as little the essentials of his exposition as do Professor Fisher's doctrines appear to him to differ in the realities they represent from the teachings of the best of the older writers. The form of the doctrine appears to be different, the fundamental truths as grasped by an appreciative student are not seriously challenged. We quarrel about words, which, in parts of the particular field with which we are here concerned, prove peculiarly poor channels for the conveyance of ideas. Perhaps Professor Fisher is right, and the use of a different set of phrases might contribute to a truer appreciation of essential verities, and to sounder practical action in important relations of life, in business and in legislation.

The first point which we note, then, is that we are offered a new set of definitions of terms. It is recognized that the new definitions are not in agreement with the old, nor are they in any more complete agreement with the somewhat loose connotation of the words employed, whether in general conversation or in business jargon. Need we say that, given a sufficient degree of freedom in defining terms, doctrines of the most simple character may be stated in words which give them an air of startling paradox or suggest downright contradiction of accepted views.

Professor Fisher offers us a definition of wealth which

embraces all material objects, man himself included. This is an attractive notion, for one sympathizes with the view that, if a slave be wealth to his owner, he should still be wealth when he becomes a free man and owns himself. But the traditional distinction between man, as the creator of wealth and the enjoyer of its services, and the wealth which exists to minister to man, retains some force. It hardly appears necessary, in order to secure some apparent consistency and simplicity of phraseology, to abandon this fundamental distinction. We can recognize that the purpose of the acquisition of wealth is the control of the services which the wealth can render, and that services of other human beings rank on the same level as desiderata with services of material objects other than human beings. Whether the inclusion of man within the limits of the concept "wealth" may not be productive of difficulties, of confusion arising from the identity of the renderer and the recipient of the desirable services which come under discussion, we have not sufficient space to discuss here, and it is a matter somewhat aside from the main topic of discussion.

But the broadened definition of wealth, and a corresponding broadened concept of capital, is very closely connected with the concept of income which is offered. Income, it is contended,—that is to say, final true income,—consists, not of material things at all, but of services, or rather immaterial satisfactions which these services evoke. It is recognized that the word "income" is not currently used in this sense. We feel much sympathy with the desire to emphasize, on the one hand, that the ultimate purpose sought from material wealth, or from the efforts which we can command from fellow human beings, is the rendering of services, the production of psychical income; on the other, that the procuring of money, food, clothing, etc, is but a means towards the procuring of that psychical income. Professor Fisher desires to distinguish as "interactions" the entire class of so-called income elements of which these last are a few illustrations, and to reserve the term "income" for the satisfactions rendered by these material objects.

He finds illuminating illustrations in double-entry book-keeping of the bringing into an account such an item which appears on both credit and debit sides,—money received and money spent, money owed and money claimable,—entries which enable the account to set forth important relations, while, by appearing on both sides, errors of improper counting are avoided.

But it may be doubted whether the course selected—the segregation of the term “income” so as to apply only to psychical income, ultimate income of satisfactions—is a course which, at the present, if at any, stage of the development of economic discussion, is a feasible one. Our author himself finds it necessary to admit money income as properly income, and the plea that it is the “bringing-in” (see *Capital and Income*, p. 155, n.) of the money income which is the service rendered by certain kinds of property must be held to be somewhat of a subterfuge, adopted for the sake of a formal consistency. Might not the purpose in view have been attained by the specification of two kinds of income, property-income and services-income, the latter corresponding to what Professor Fisher strives, not quite consistently, to call income, and the former corresponding to the “interactions” which play so large a part in his discussion? Ordinary people might, were this course followed, escape from some of the rather serious risk of failure to comprehend what is the point of some portions of the discussion. There seems to be a good deal that the non-expert will feel to be quibbling about words, and, in view of the fact that in his use of the word “capital” our author lays much stress on the effective identity between his usage and that of business men, it might have been expected that more consideration would have been vouchsafed to the prejudices of business men in regard to the connotation of “income.” It is true that business men can readily be induced to accept “services-income” as a true part of income in some cases where the direct satisfactions rendered by “capital-property” are in question; but the general use of the word “income” to denote the “property-income,” which

is the mediate form, not the final psychical income, seems to impose on us the necessity of retaining a phraseology which does not separate theoretic disquisitions by too great a gulf from market usage.

What is here involved is no mere question of words and their propriety, for, in the view of the writer, it is on this selection of a highly specialized, strictly limited connotation for the word "income" that an apparent important conflict of views between Professor Fisher and some of his admiring colleagues depends. The attitude towards the mystic question, "Are savings income?" serves as a kind of crucial test to distinguish those who are sound in their views from the others. This problem is Professor Fisher's *pons asinorum* for economists. But, if the view which is here suggested be acceptable, there is no difficulty in answering the question without involving conflict of views between Professor Fisher and such as maintain the standpoint of the present writer. In Professor Fisher's sense of the word, of course, savings are not a part of income; that is to say, a part of services-income. But they are a part of property-income, and are used in a way which defers the time at which the services-income, which will be rendered in due course, shall mature. The determination to use the word "income" as a term with a meaning other than that assigned to the word "revenue" is responsible for a rather prolonged and, we venture to think, by no means fruitful inquiry and for unnecessary disquisitions on the failure of respected economists to appreciate certain rather obvious and fundamental truths. Attach a different meaning to your word-symbols from that which they bear in other people's minds, and you may very readily find that they deny what you find obviously true, and assert what you cannot but declare to be false. That is one serious danger of starting out, as our author does, with a set of new definitions for the most fundamental terms in the particular field in which he is engaged. By so doing, one may approach perilously near to setting up windmills at which he may tilt, and doing so in complete good faith.

One application of the "savings are not income" doctrine is to the case of the taxation of three brothers, each inheriting the same amount at the death of a relative. One buys a perpetual annuity, a second accumulates his capital for a period until he can buy a perpetual annuity of double the annual amount, while the third buys a short-term annuity of quadruple the annual amount secured by the first. It is contended that the three brothers ought to pay income-tax in such manner that the present value of all taxes paid should be the same for each of them. But this is to accept expenditure as the test of ability to share in public burdens, and ordinary income-taxes, or rather income-and-property taxes, are based on the view that increased accumulations increase the ability to contribute to public outlays. If the theory be accepted that services-income, or, what amounts to the same thing in the instance selected, expenditure, is to be the basis of taxation, it would be necessary to admit that a man who invested the entire revenue of an estate for any period, say a century, in adding to or improving the estate, ought not to pay income-tax during that period, so far as his revenue from the given estate is concerned. But, as owner of an improving property, it may fairly be contended that he is interested in the government of the region where it is situated, and according to any reasonable standard has an increasing ability to share in the expenses of maintaining that government. To exempt such cases would, indeed, encourage investment of capital, but would hardly accord with ordinary standards of fairness as between different citizens.

But we are not engaged in a discussion of what is fair taxation. We merely protest that, in our view, Professor Fisher has unearthed a mare's-nest by means of his application of a special and limited meaning to the word "income." We agree that savings are not final services-income. But we do not consider that this disposes of the question, "Are savings income?" when the words have the meanings which they involuntarily suggest to the ordinary citizen, or that, for lack of a refined metaphysical apparatus, the ordinary

citizen blunders into fundamental error in the matter of the relation of savings and income.

Let us for a moment attempt to apply the ideas which Professor Fisher seems to accept. Expenditure of revenue on enduring sources of income constitutes saving, we understand. The purchase of a motor car, a suit of clothes, or a box of cigars, is, each in its degree, saving in this sense, unless the income be the satisfaction of acquisition; and, if so, then what place is there for the satisfactions arising from use? How much of the motor car's value and of that of the suit of clothes are we to regard as the savings of the year of their purchase, how much as the income of the year? These questions are not neglected by our author, but we submit that, to exclude from income-taxation that part of a man's revenue which is expended on the purchase of a motor car on the last day of the financial year (thus excluding, for convenience in bringing out the point, the rendering by the car of services of transport within the year) would be a somewhat fantastic result of the doctrine that savings, not being income, should go untaxed.

It might, further, occur to readers of Professor Fisher's interesting discussion that an objection could be entered to the cancellation of "interactions" only up to the final point of services rendered to the person of the recipient of an income. Income of money being balanced by outgo of money in purchase of commodities, and income of commodities by their outgo or destruction in rendering services, the question might be asked whether it be not possible to regard the nourishment of the body, not as the final end of a certain part of these services, but as an intermediate stage in a continuous process, the body being thus rendered fit for further labor, which in its turn contributes to the production of more food, etc., and so on and so on. Some part of the final income of services would, on this view, be only part of an interaction of the same general character as those to which Professor Fisher applies this designation. In discussing subjective income, in fact, our author appears to go a good way towards developing such a view. A

laborer at \$2 per day may, it is suggested (*Capital and Income*, p. 171), "work so hard for it as to justify a deduction of \$1.50 for the effort," and he "would then be receiving a net income of only 50 cents a day." A case is suggested (*loc. cit.*, p. 172) in which a laborer at \$2 a day estimates that this income, secured by working eight hours a day, would be equivalent to \$1.50 per day without labor, and has thus virtually made a deduction of 50 cents a day for the irksomeness of his work. Let us suppose that it costs at least \$2 per day to keep himself and his family alive. He could not then regard a proposition to accept less than \$2 per day with any favor, even if combined with the release from obligation to labor. It might be contended that a life without work could be supported at a less expense than a strenuous life of hard work. But this hardly disposes of the point we would put. If \$2 daily be earned, and no less than \$2 daily will suffice to maintain life, so that the offer of less without work could not be accepted, would this mean that the irksomeness of work was *nil* to such a man? The method proposed for estimating irksomeness has as many defects as the use of money as a measure of total utility.

The treatment of cost of production which is presented in the course of Professor Fisher's exposition appears to the writer to be defective in the extreme. In one place we are informed that most of what is so called "is, in the last analysis, not cost at all" (*Rate of Interest*, p. 173). "It costs flour to produce bread; but all that the flour costs to the baker is income to the miller," and so on. But does this render a study of cost useless or unimportant? Let it be granted that we have at our disposal an ever-increasing equipment of appliances whose availability for use is a fact effectively independent of the manner in which these appliances came into being. Yet, as an index of the level of value for a large part of the commodities which have an important place in every-day life for most of us, cost may be a good deal more readily estimated than utility; that is, than marginal social utility. To the baker the

cost of flour is a very important fact, aiding him in determining at what price he can afford to offer bread for sale. He can only learn something about the utility of the bread by observing whether he is able to find customers for his loaves at the price at which he offers them. The very fact that what is cost to one entrepreneur is income to another, instead of reducing the study of cost to a position of almost negligible importance, brings out the correspondence of cost and utility. Profitable production requires that cost—objective and subjective cost together—should be less than the utility produced, each being measured in terms of money. And, in the presence of active competition, the excess of utility over cost, measuring each again by the money equivalent, is reduced to a minimum. As an objective measure of the value of goods produced under these conditions for continuously recurring consumption, cost may be deserving of as careful study as utility, and may offer a more tangible object for study. But all this is mere repetition, inadequate because necessarily condensed, of very familiar matters. The school to which our author belongs prefers to concentrate attention on utility. But, inasmuch as marginal utility is always affected in its amount by abundance of supply, the conditions on which that abundance rests demand the most careful examination. In this we may say to the utility school, "This ought ye to have done, and not to leave the other undone." Designating cost as the disutility of effort or sacrifice does not dispose of it, and render these disservices unworthy of attention, analysis, and measure so far as the conditions allow.

Throughout the discussion of the concepts of capital and interest the one view thrust into prominence is that the "value" of capital is a derivative one, and dependent on the anticipated value of the expected services of the capital in question. If we substitute "utility" for value, there is nothing to quarrel with in this assertion. But the abundance of capital depends on something else than the expected services; and the relative valuation of present and future

services, as is fully recognized, depends on the relative abundance of those services, and thus on the extent to which in the past the immediate future has been sacrificed to the more remote future, and present satisfaction sacrificed to the creation of wealth, the services of which must be rendered in the future, if at all. In this we are saying nothing which appears to be in conflict with the view championed by our author.

But we find it difficult to accept the doctrine that capital value is the fundamental thing, and that, assuming an unchanged equipment of appliances for rendering future service, there is appropriateness in saying that capital has increased or decreased simply because the relative estimate of present and future has been modified. The equipment of instruments to produce distant results remaining unchanged, this lack of change is a fact which has much importance to the community, even tho the perspective view of the future has temporarily been modified, and therewith the valuation of this complex of more or less durable instruments has undergone a change. Capital values are changed. But is it proper to assert that capital has undergone a parallel change? Reference is made by our author to the practise of book-keepers in keeping the figures representing the capital of a joint stock company unaltered in cases where depreciation of assets through a changed outlook on the future has occurred, and is expected to be only temporary. May it not be suggested that there is something to be said for this, even tho the balance sheet professes to deal with values, and values only? The conditions which made utility correspond in some manner with cost being expected to recur, a cost-value, more or less modified, is regarded as, in the long run, appropriate, and more so than a utility-value affected by oscillations of confidence from being over-sanguine to being unduly hesitant. Impropriety may certainly be alleged where enduring changes in the perspective relations of future and present have occurred (such changes being accompanied by changes in the kind and amount of appliances at the disposal of the

community for providing for the future), and these are ignored in financial accounts. But the avoidance of a seesaw in balance sheets has its advantages. Even those who understood what had happened would find some difficulty in following a conservative course if, during a year or two of low interest rates, excessive surpluses in value of assets were shown by their balance sheets, and in subsequent years, with higher loan-rates ruling, the accounts were made to show startling deficits. The technical efficiency of manufacturing equipment being maintained, the point of view which presents the capital as corresponding to that technical efficiency, in spite of temporary changes in the rate of interest, while in conflict with the doctrine of the volumes before us, as we understand it, reflects a large degree of common sense.

We confess to feeling a sense of revolt at the view that the capital of a community has largely increased or decreased, is constantly undergoing oscillatory changes, when the rate of interest fluctuates, even apart from any modification of the means possessed by men to maintain their struggle with nature. Of course, the recognition that certain parts of that equipment will not realize what was expected when they were brought into being is perfectly proper, and not to recognize it would be improper. But we find more to commend in the view that, apart from temporary oscillations due to temperamental fluctuations, the increase of the means for exploiting nature's resources is the source of the reduction in interest rates, when that increase is not accompanied by extended knowledge of how present effort may be used with hitherto unattainable advantage in securing future desirable results. The value of material capital, capable of producing given results, is greater when interest is low than when interest is high, if those results have not, through the increased supply of their like, suffered a decrease in utility, offsetting the decrease in the rate of capitalization. But we do not find that the increased value of the aggregate of material capital is traceable to the fall of interest mainly. There are, in

fact, several co-operating influences. The increasing supplies of technical equipment for the exploitation of the future induce such increase of prospective supplies of future goods as to diminish the marginal utility of future satisfactions. The relative abundance of future and present services being thus affected, the rate at which future services are acceptable in substitution for like present services is also affected, and this rate, serving as the basis for a rate of capitalization, causes a given amount of capital goods to be expressed as a greater value than before to the extent to which the offset above named is not complete. Unless we have quite misunderstood him, our author finds but a trifling place for the increase of capital values as the cause of a decrease in interest rates, the increase of values being due to increase of capital goods. In his view the sequence of cause and effect is always and invariably from future to present, not from present to future. What we expect to get determines what we have (in value of capital equipment). It is hard to quarrel with this. Yet it ingeniously hides what we believe to be a more important consideration; namely, that what we shall get is dependent on what we are now willing to provide in equipment for securing future services. At bottom we do not suspect Professor Fisher of any failure to appreciate this. But he steadily employs a phraseology which appears to deny importance to what we hold to be quite fundamental phenomena. That it is necessary to give due consideration to the cost of capital goods may be illustrated by the relation of invention to capital value. Some inventions permit of the attainment of a given end at a reduced outlay. Instrumental goods capable of yielding certain definite services now secured by other instruments may either yield those services earlier with appliances whose construction involves no more labor than that of the older appliances or may, with much reduced labor of construction, yield equally abundant services at a period not more distant in time than was needed by the older appliances. It is consistent with experience that, without

such a realized increase of appliances of this kind as may impose on the said future services a lower marginal utility through greater prospective abundance, the value of the capital appliances falls corresponding to reduced cost. A revision of the estimate of the importance of the anticipated services sometimes takes place without a prospective increase in those services, when they become attainable at a reduced cost. Will the doctrine that capital value is simply the discounted income value adequately explain such changes? It is not contended that it is not in accord with the facts, but merely that the change in value is set in motion from the side of capital, not from that of income, in some cases.

At this point, reference may also be made to another leading point of doctrine in which Professor Fisher and many of his eminent colleagues have discarded the classical teaching; namely, the relation of land to capital. As all forms of capital goods have their values determined, according to this school of thought, by discounting their anticipated future services, and as land has its value similarly determined, the distinction between the relations of income to value in the case of land and in that of man-made instruments of production must be held to vanish. If we could agree that the influence of cost were as negligible as Professor Fisher insists it is, we should find it easy to accept this view and class land and capital together. But we do not find that the ratio of income value to capital value is dependent on such nearly identical facts in the two cases. As above stated, we contend for a valuation of instrumental goods in which cost plays a coequal part with utility, while for land we rely on utility alone. It is true that much capital is of such an enduring nature that, once brought into being, its continued existence is properly regarded as independent of the original cost of formation. As Professor Marshall, among others, has pointed out, there occur all grades of dependence of cost on value, from the one extreme where cost calls for no consideration to the other where, unless cost-value is covered by utility-value,

the goods will not be brought into being at all. But the occurrence of the former class, and of intermediate grades which approximate to it, does not exhaust the field of observation, and we are not entitled to elaborate and regard as exhaustive a discussion from which all consideration of the effect of cost has been practically excluded. The utilities which can be replaced as they are exhausted, and can be multiplied at will, differ in important respects from those which exist apart from man's will, and can neither be created nor destroyed; and we ought not to treat the former as if they were of the latter class.

The extension of the process of evaluation proper for the case of a bond, a farm, or a mine so as to be the *exclusive* basis of all evaluations of goods seems to assume the existence of a habit of careful calculation in minor everyday purchases which recalls the assumptions briefly described as "that there is a Scotchman inside each of us." Would any of us attempt to value a piano in the same fashion as a bond?

We have not devoted the space at our disposal to a review of the numerous features of Professor Fisher's exposition which command our admiration and in which we willingly follow his lead. Neither will space permit of reference to some striking deductions from the theory, such as the ingenious point that changes of the interest rate have a large influence on the value of some kinds of labor, but little on that of others. We agree that a sound theory of interest must find a place for important features of the productivity, cost, and agio theories, and the blend which would satisfy our demand would not be altogether dissimilar from Professor Fisher's in the proportions of the ingredients selected from these three different sets of theories. We find the presentation of the conception of varying income streams, and their diagrammatic illustration, very helpful, tho we are not entirely confident that the diagrams will make so effective an appeal to all students of economics as to ourselves.

At one point in relation to the composition and shape of

an income stream it seems to us that the standpoint of the individual has been permitted to overshadow that of the aggregate of individuals,—the community. The composition and shape of the income stream yielded by the particular forms of capital selected for exploitation by an individual are held to be almost wholly without effect on the services-income which he secures, as, by sale and purchase, borrowing and lending, he can exchange with others, and substitute for any given income-stream one of equivalent value. But—and this has, it seems to us, hardly received sufficient attention—the aggregate of individual incomes must make up the income of the community in kind and time distribution. When we consider the case of investment in a mine, the yield of which is exhausted in a short term of years, from the standpoint of the individual we have an income ceasing with the mine's exhaustion. But a mine's products do not yield all their services for many years after the mineral has been extracted. From the point of view of society the mine will not form a suitable illustration of investment for results which gradually decrease to the vanishing point in a brief period. Society has part of its income deferred for a very long period when present resources are devoted to the exploitation of a mine, and the time-shape of income which is used as characteristic of mining seems not at all applicable when we view matters from the point of view of the community in place of that of the individual. One of the contributing causes of recurrent commercial and industrial depression may be said to be this difference between the position of the individual and of the community in regard to the form of the income-stream. The ease with which, ordinarily, any kind of property-income stream for an individual can be made the means of securing any desired kind of services-income stream leads to a position where the community's income-stream has taken on a highly inconvenient form and composition, and individuals strive in vain to carry on the usual transformations by exchange of their own income-streams.

This seems to us to be stating only what has often been stated in other terms, and to be stating it in a form which, for most purposes, has no serious advantage over the more common and less technical expression. Some part of the apparent novelty of several doctrines found within the covers of these two volumes seems to be of a like character. A novel phraseology suggests more new points of view than are in fact realized by its means. To some it is very helpful, but not equally so to all.

As we began, so we finish. The more we reread and reflect on the chapters of these books, the more we feel convinced that the truth that is in them has been preached by some writers who are not mentioned with honor in their pages. To some of us one mode of presentation of truth carries conviction more readily, to some another. For his own part the writer feels most regret at the extent to which Professor Fisher, and those who think like him, have felt it necessary to tear down what has been built before them, in order to find a place for their edifice. It does not appear to him to be reasonable to believe that some very simple truths have had to wait till the twentieth century for discovery, when we know how eagerly many competent workers have sought the truth before any of us saw the light. We view certain facts from a standpoint somewhat different from theirs. Our apparatus of analysis is in some respects more perfect than was theirs. But when, in order that we may be right, we find it necessary to proclaim a vast body of respected and intelligent people in former generations wrong, there seems to be reason for wondering whether we might not find that they knew a good deal, and saw further beyond their noses than the too ready rejection of their views by some of our own generation would seem to imply. Should we not advance faster if we did a little less of radical reconstruction? Or is the principle which finds illustration in the early scrapping of used machinery as the surest road to efficient production the true principle in the realm of ideas as well as in the realm of material things? Or is it all a question of temperament, so that some advance

faster by the one method, some by the other? If so, may not a plea be put forward by those who take the one view that those who take the other will not insist so much on their mode of procedure as to leave no opportunity for their fellows to pursue truth by the methods which commend themselves most to them?

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